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U.S. DEPARTMENT OF LABOR
CHILDREN'S BUREAU

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UNITED STATES
DEPARTMENT OF LABOR

FRANCES PERKINS, SECRETARY

CHILDREN'S BUREAU

KATHARINE F. LENROOT, CHIEF

WE ARE fighting again for human freedom and especially for the future of our children in a free world. Children must be safeguarded—and they can be safeguarded—in the midst of this total war so that they can live and share in that future.—*A Children's Charter in Wartime.*

• YOUNG WORKERS IN WARTIME •

Safeguarding Young Workers in Wartime Agriculture

Report of Conference on Supervision and Employment Conditions for Young Workers in Wartime Agriculture, June 18–19, 1942

NOTE.—In view of the development of various projects for young people to live and work in groups as one means of helping to meet farm labor shortages due to war conditions, a conference on supervision and employment conditions for young workers in wartime agriculture was called by the Children's Bureau on June 18–19, 1942. The conference was made up of representatives of agencies, government and private, interested in agricultural production and in the employment conditions and education of young people, and of representatives of youth-serving agencies with experience in conducting educational and recreational activities for young people of high-school age.

The conclusions of the conference are presented in the following statement, which represents the contribution of agencies experienced in work with groups of young people as well as of those familiar with employment needs and problems. It was prepared by the conference as its statement of standards for the recruitment, placement, and supervision of youth under 18 years of age as an emergency farm-labor force during the war. It is directed especially toward those who work or live in groups.

The conference developed this statement with the idea that it world be used in conjuction with Policies on Recruitment of Young Workers for Wartime Agriculture, prepared in cooperation with the United States Office of Education, the United States Department of Agriculture, and the United States Employment Service and issued by the Children's Bureau in March 1942.

SUMMARY OF PRINCIPLES ACCEPTED

The present widespread use of nonfarm youth as emergency workers in wartime agriculture makes advisable the establishment of certain basic principles and standards for their employment. Such principles and standards are necessary to insure that these young workers will be adequately safeguarded and at the same time make the most efficient contribution possible to production. They are especially important also because of the existence of long-recognized child-labor abuses in some types of agricultural work.

Community programs for the recruitment and employment of young persons under 18 years of age in agriculture should be undertaken only to fill definite and known needs and only when experienced workers of proper age and capacity are not available. Such programs should include:

(1) Acceptance by *State and local committees*, representing public and private agencies interested in youth and in farm production, of responsibility for developing programs and carrying out standards for the protection of young workers. Executive authority should be delegated to designated agencies or persons, with the assistance of qualified staff.

(2) *Age limitations* as follows: A minimum of 14 years for hired farm labor; 16 years if the worker is placed to live away from his family.

(3) *Protection of educational opportunity* for youth attending school by (*a*) employing pupils of 16 and 17 years during school hours, only if no older workers are available; (*b*) limiting employment of pupils 14 and 15 years to work during vacation or outside school hours, with no release from school or modification of school programs unless the need can be met in no other practicable way.

(4) *Precautionary measures before placement*, particularly for those who will live away from their families: Written parental consent, documentary evidence of age, physical examination, and appropriate immunizations.

(5) *Measures to promote morale and general welfare:* (*a*) Suitable placement of individuals selected; (*b*) preparation for work; (*c*) adequate supervision of the young persons while at work and, where they are living away from their families, supervision of camp life or other living arrangements, and provision for recreational activities and community relationships, including church contacts.

(6) *Protection of health and safety* by (*a*) adequate sanitary facilities; (b) good living conditions and adequate diet for workers placed in camps or farm homes; (*c*) availability of medical and hospital services; (*d*) protection against accidents; (*e*) payment of expenses in case of injury; (*f*) safe transportation to and from work.

(7) *Good working conditions*, including: (*a*) Wages not less than those paid to older workers for comparable work; (*b*) hours for minors under 18 not more than 8 a day (6-hour day is desirable for children of 14 and 15), and not more than 6 days a week (except for morning and evening chores on the seventh day by young persons doing work of a general farm hand); (*c*) provision for rest and lunch periods; (*d*) work at a distance from home or living quarters that will require absence for work of not more than 10 hours daily.

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(8) *Full compliance with State and Federal child-labor laws and State compulsory school-attendance laws*, as well as with the statement, Policies on Recruitment of Young Workers for Wartime Agriculture, prepared by the Children's Bureau of the United States Department of Labor, and approved by the United States Office of Education, the United States Department of Agriculture, and the United States Employment Service.

Protection of Young Workers in Wartime Agriculture Is Needed

As this year's crops mature, many school youth not previously employed in agriculture are being called upon to serve as emergency workers on farms. The demand for these young workers is based upon the need for increasing farm production in wartime as well as the need for obtaining supplementary labor to take the place of workers going into the armed forces and into war industries, and of those in certain areas unable to leave for farm work elsewhere because of transportation difficulties.

The work for which young people are being recruited is of two main types. The more important type, in terms of the number of workers employed, is the seasonal harvesting of fruits, vegetables, and other crops, which requires large groups of workers over a short period and to a limited extent may necessitate the bringing together of workers to live in camps. The other main type is general farm work, which often requires that young workers live on individual farms.

Although the actual need for young workers in agriculture is not widespread at present, it is likely to increase as the war continues and existing labor reserves diminish. For youth who are to be employed on farms the safeguarding of their working and living conditions is essential both for full production and for the well-being of the young people concerned. Such safeguards are especially important because of the existence of long-recognized child-labor abuses in some types of agricultural work, where very young children as well as older youth have been employed at the expense of their education, health, and welfare. Such conditions are detrimental to the development of sound manpower and should be eliminated. Every effort should be made to prevent comparable abuses from occurring in any employment of young people recruited to meet new wartime needs.

Plans for the wise use of young workers between 14 and 18 years of age to meet emergencies in wartime agriculture must be based on consideration of all available sources of labor. Young persons of these ages should not be asked to take farm jobs until it is clearly demonstrated that experienced workers of proper age and capacity who depend upon agricultural labor for a livelihood have been fully utilized. (See also section on *Recruitment and Placement.*)

Unfortunate Results for Youth and for Production Must Be Avoided

Farm employment for suitable age groups, if well planned and supervised, can be made beneficial to the young people as well as productive for farmers and growers. Urban youth can come to know something of rural life. The interests of production as well as of the youth can be served through the development of good morale, good health, and good work habits in the young workers. Uncontrolled, however, employment of young people may break down opportunities for fair wages and full employment for adult workers. Badly managed, their employment experience may harm the health and stamina of young people, curtail their educational opportunities, and lead them to feel that advantage has been taken of their patriotism. Such unfortunate results would damage the prestige of farm work for young people and reduce the number of boys and girls interested in undertaking emergency farm employment in the future.

State and Local Organization Is Essential Where Young Workers Are Needed

In order to insure that farm work contributes both to production and to the well-being of the young persons, plans for the recruitment and employment of young people in wartime agriculture should be the responsibility of committees of representatives of State and local bodies, both public and private, working in close cooperation with the United States Employment Service. This planning should concern recruitment, working conditions, and supervision, and should be done on both a State and a county or local basis. Where there are several areas within a State in which groups of young workers may be needed, a State committee is particularly desirable to coordinate the work of the county or local organizations, to assure adoption of suitable standards throughout the State, and to serve as a clearing house for problems as they arise. Participating in the work of State and local committees should be representatives of public agencies concerned with labor, education, agriculture, health, and child welfare; representatives of farm, labor, teacher, community-planning and youth-serving organizations; and representatives of parent-teacher and church

groups. National or racial groups should also be represented on these committees, where such groups are affected by the recruitment program.

Executive authority for carrying out plans for safeguarding the employment and living conditions of the young workers should be delegated to agencies or persons accepting definite responsibilities for their well-being. Such persons or agencies should have the assistance of qualified staff. The services of appropriate Federal and State agencies should be made available for assistance in developing plans and standards and in carrying out the programs.

Principles and Standards Must Be Observed in Interests of Both Youth and Production

Recruitment and Placement.

Recruitment of young people should be for the purpose of supplying definite and known needs for agricultural labor that cannot be met through the usual sources of labor. Actual recruitment of youth in advance of the determination of need for their services (as distinguished from preliminary registration) should be discouraged as injurious to morale. It should not be undertaken to serve areas that have an abundance of unused adult labor or areas in which low wages and poor working conditions discourage adult employment. For orderly handling, all recruitment and placement of young workers in agriculture should be done through or in cooperation with the United States Employment Service.

All emergency recruitment and placement should be in full compliance with State and Federal child-labor laws and State compulsory school-attendance laws, as well as with the statement, Policies on Recruitment of Young Workers for Wartime Agriculture,[1] prepared by the Children's Bureau of the United States Department of Labor and approved by the United States Office of Education, the United States Department of Agriculture, and the United States Employment Service.

No child under 14 years of age should be recruited for hired farm labor. Boys and girls of 14 and 15 years of age should be employed only during vacation periods or outside school hours; children of these ages should not be called upon for farm work during periods which would require modification of their school programs unless 16- or 17-year-old minors or older persons are not available. Boys and girls 16 years of age and over who are in school should not be recruited for work during school terms so long as older workers are available.

Young people should not be placed in work projects that require them to live in camps or on farms away from their families unless they are 16 years of age or older.

In the farm placement of young persons 16 to 18 years of age who will live away from their families, whether in farm homes or in camps for young workers (and if possible also for youth of these ages not living away from home), the following should be required:

Written consent of parent;
Documentary evidence of age that, where possible, meets the standards prescribed for employment or age certificates in the State in which the young worker is placed;
A physical examination indicating that the young person is physically fit for farm work and free from communicable disease (see section on *Health and Sanitation*); and
Appropriate immunizations (see section on *Health and Sanitation*).

In cases where these young persons are to live in the home of the employer, placement should be made only where the farmer guarantees adequate living arrangements, good meals, and suitable working conditions including necessary instruction in safe and efficient methods of work. (See sections on *Supervision* and *Prevention of Accidents.*)

Preparation for Work.

The young workers' chance for success in work on farms will be greatly improved if they receive advance information on what to expect in their farm experience. Such preparation for work should deal with the nature of the crops to be worked on, the conditions of work to be expected, and protection against hazards of the work, as well as with the new living arrangements for those who are to leave home. For urban youth going into general farm work, instruction should be given in the fundamentals of the varied tasks they will be expected to perform.

Supervision.

Supervision over the young workers in their work and living arrangements is the key to the success or failure of the work experience.

Supervision in regard to work activities will vary with the age, numbers, and experience of the workers and with the kinds of tasks to be performed. Where groups of young workers are involved, it will often be found helpful to have group supervisors who will attend to practical arrangements regarding transportation, working conditions, safety, rest periods, and meals, and help to maintain the interest,

[1] Copies are available in leaflet form as a reprint from *The Child*, March 1942.

morale, and discipline of the workers. The number of young people at work as a group for which one supervisor would be expected to be responsible should be not larger than 25.

The nature of supervision with respect to living arrangements and social activities for those away from home will differ according to whether the young persons are to live on individual farms or in a camp or under some other group-living arrangement. In either case careful selection of workers and proper supervision is essential, if the experience is to be beneficial to the young persons and satisfactory to their employers.

The young workers placed in individual farm homes are on their own and should have the chance to develop self-reliance, to gain understanding of farm life, and to live in a home atmosphere. In these cases supervision should be directed primarily toward the satisfactory adjustment of the workers in the family and to farm life—a responsibility primarily of the farmer and his family, but one in which the assistance and guidance of qualified persons from a community organization can be of great value. Provision should be made for frequent contact of the young workers with persons of their own age and for participation in community life.

Young workers living in a well-run camp have the advantage of companionship with persons of their own age and the broader and more varied recreational and educational opportunities afforded by group life. In all camps for young workers there should be a qualified director in charge who, if he is also to be responsible for work supervision, should be a person experienced in the technical requirements of agricultural work. There should be preferably not more than 25 persons to one supervisor in the living quarters. In large camps additional staff with experience in conducting recreational and educational activities will be required to give the necessary leadership. Teachers, especially those familiar with the methods of progressive education and with vocational agriculture, and staff members from organized camps and leisure-time agencies are a major resource for the type of leadership needed.

The planning and the fixing of responsibility for supervision of work and living conditions are the most important functions of the State and the local committees described in the section on State and local organization. Without acceptance of these responsibilities by the various interests involved and without a clear fixing of responsibility on appropriate agencies or individuals for the execution of the program adopted, adequate supervision over the young workers cannot be expected.

Health and Sanitation.

In the interests both of the workers' well-being and of production, it is important that health be safeguarded in every possible way.

It is recommended that before his employment, a medical history of the young person be obtained and an adequate physical examination be made. This medical history and physical examination are especially important in the case of the young person sent away from home to live on an individual farm or in a camp, because under such situations certain responsibilities for safeguarding his health are assumed by those who house or employ him.

The desirable items to include in the medical history are as a minimum: Previous inoculations, operations, allergy, tuberculosis, and heart disease. The physical examination should serve to detect any existing physical defects, should determine the presence of acute infection, and should afford an appraisal of health. It should include as a minimum the young worker's weight and temperature, an examination of hair, skin, ears, throat, and heart, and the noting of the presence of hernia. At the conclusion of the examination the physician should estimate the young person's nutritional status and should make a written statement indicating his freedom from communicable diseases and indicating his physical ability to engage in the general type of farm work in which he is expected to be placed. It would be desirable to give the worker going to camp a further physical check-up at the time of admission if 2 weeks has elapsed since the physical examination.

Immunizations as recommended by State boards of health should be given, preferably at time of registration for work. These include vaccination against smallpox, even if there has been a previous vaccination, typhoid immunization, and such other immunizations as the State board of health may advise. In addition, it is strongly recommended that young persons entering farm work be given active immunization against tetanus.

Prior to the development of a program for placing young persons in camps, there should be a review by the State or local committee to determine whether medical supervision and care are available to the camp. Transportation should be available at all times for use in case of accident or illness. The selection of a camp site should be made only after consultation with the State board of health or local health officer. All camps should provide adequate liv-

ing accommodations and comply fully with State, county, and local laws and regulations regarding water supply and milk supply, as well as sewage disposal and other sanitary conditions.[2] Young persons should be placed only in camps which have the approval of the State, county, or other local health department.[3]

In camps the dietary standards set up in the Yardstick of Good Nutrition [4] should be followed and assistance in planning meals should be obtained from home-demonstration agents, health-department nutritionists, and home-economics teachers. If feasible, a dietitian should be employed on the staff.

There is a danger of transmission of certain infectious diseases including streptococcal infections, tuberculosis, and undulant fever through the use of raw milk. Both pasteurization and boiling of milk are satisfactory preventive measures. Camps should, if possible, make arrangements to obtain a supply of pasteurized milk.

Suitable toilet and washing facilities should be available on the farm where the boys or girls work. Water from approved sources, kept in covered containers, should be readily accessible in the fields and individual cups should be used.

No placement should be made in a household in which a person with communicable disease is known to live.

Prevention of Accidents.

Farm work is subject to serious accident hazards. This fact requires special consideration in the case of young inexperienced persons, who are unlikely to recognize the dangers, and who tend to be venturesome and take needless risks. Damage to equipment, furthermore, is likely to result when tractors or farm machinery are handled by inexperienced workers.

Instruction concerning the hazards connected with every-day farm tasks and the ways of avoiding accidents should always be made a part of the training program and of supervision on the job. This should include special emphasis on the proper use of tools and implements. Work involving the handling of animals, tractors, machinery, vehicles, and dangerous tools and implements should be assigned only to persons who have been given thorough training in their handling or use and who have sufficient maturity for performing such tasks.

First-aid equipment should be provided in the camps where the young persons live, and some means should be provided for rendering first aid at the work place.

Responsibility for payment of medical expenses incurred in case of injury on the job should be accepted by the employer; where practicable the employment of the young workers should be covered by workmen's compensation; otherwise some other form of insurance is advisable.

Transportation.

Safe means of transportation should be provided when it is necessary to transport young people to and from work. Buses and automobiles, rather than trucks, should be used if possible. If trucks are used for transportation, they should be provided with safe seating arrangements and with proper safety equipment. Overcrowding should be avoided. Any motor vehicle used for transporting young workers should be in a safe mechanical condition, driven by a responsible, licensed adult, maintained in full compliance with State laws and regulations, and covered by liability insurance.

Wages.

The employment of young workers should not be a means of obtaining cheap labor or of retarding increases in agricultural wage rates. Young workers should be paid wages not less than the prevailing piece rates in the area or not less than the time rates paid to older workers for comparable work. Wages should be paid promptly in cash and in no case later than the close of the period of work for a particular farmer.

Hours.

Hours of work and the nature of the task to be performed should be adapted to the age, strength, and experience of the workers. For those unaccustomed to active outdoor labor a breaking-in period in advance of the peak demand in a crop should be provided. Actual hours of work for persons under 18 years of age should not exceed 8 hours a day, and for children 14 and 15 years of age, it is desirable that the hours of work not exceed 6 per day. The work week should not exceed 6 days, except for necessary morning and evening chores on the seventh day for young persons doing the

[2] Standards of the U. S. Public Health Service and State public health departments for camps and for home toilets should be consulted. In setting up camps, the health, safety, and sanitation standards for organized camps outlined in the American Camping Association's publication entitled "Marks of Good Camping," pp. 60–80, as well as the sections on supervision, program, and administration, will also be helpful.

[3] In addition, where other departments participate in sanitary control of water supply and sewage disposal facilities, they should be consulted.

[4] The so-called Yardstick of Good Nutrition, incorporating recommended daily allowances for specific nutrients, is contained in Recommended Dietary Allowances, published by the Committee on Food and Nutrition, National Research Council, and available from the Nutrition Division, Federal Security Agency, Washington, D. C.

Market Lists for Moderate-Cost and Liberal Meals, available from the Bureau of Home Economics, U. S. Department of Agriculture, Washington, D. C., suggests kinds and quantities of food for a week for boys and girls of different ages.

work of a general farm hand. There should be a noon meal period of at least an hour.

To prevent undue fatigue, rest periods should be given at intervals in both morning and afternoon.

Young workers between 14 and 18 years of age should not work at such distances from their home or living quarters that their absence for work would exceed 10 hours a day, including the lunch period.

Community Relationships and Leisure-Time Activities.

Recreation, social life, and relations with churches and other institutions in the rural community are essential to a satisfactory and productive away-from-home employment experience for young people. Responsibility for seeing that such opportunities are provided should be shared by the State and local committees for young workers in wartime argiculture and the farmers or camp directors under whose supervision they are living.

Child-Labor and School-Attendance Laws.

Nothing in this statement is to be understood to advocate or suggest any violation or modification of existing child-labor and school-attendance laws.

First Contested Case Under Child-Labor Provisions of Fair Labor Standards Act

A recent decision against the operators of a North Carolina slaughterhouse on June 12, 1942, brought to a successful close the first case in which legal action taken under the child-labor provisions of the Fair Labor Standards Act of 1938 has been contested. The decision, rendered by United States District Judge Isaac M. Meekins, enjoins David Roberson et al, doing business as Roberson's Slaughterhouse at Williamston, N. C., against shipping or delivering any goods for shipment in interstate commerce if removed within 30 days of the employment of children under 16 years of age.

Roberson, who had been convicted previously (July 28, 1941) in the Recorders Court of Martin County, N. C., of violating the State child-labor law by employing children in his slaughterhouse, was found to have reemployed one of the same minors contrary to the Federal law. He contended that the children involved in this case did not work on goods that were shipped in interstate commerce; that none of his business was of an interstate character; and that he did not actually hire the children to work, although he permitted them to work.

The children were employed in peeling and packing Frankfurter sausages, which, it was claimed, were sold only within the State of North Carolina. The evidence indicated, however, that hides, bones, and tallow produced in the slaughterhouse were sold at the slaughterhouse and were reshipped by purchasers to points outside the State. "It is clear," stated Judge Meekins in rendering his decision, "that if he is doing business in interstate commerce, he is not entitled to work children under 16 years of age."

Roberson's counsel contended that the children were working for their mothers, who were employed at the slaughterhouse under a contract arrangement. But the mothers testified that they had never received pay for the work the children did, and that the children were paid directly for their work.

This decision confirms the position taken by the Children's Bureau since the effective date of the act that section 12 (a) applies to any producer of goods if children are employed contrary to the minimum-age standards of the act in any capacity.

BOOK NOTES

VIOLATIONS OF FREE SPEECH AND RIGHTS OF LABOR. Report of the Committee on Education and Labor pursuant to S. Res. 266 (74th Cong.), printed as Senate Report No. 1150, part 3 (Washington, 1942, 405 pp.). This is a segment of the committee's California report, which is being issued in 10 parts.

One of the committee's recommendations is that existing laws regulating child labor be amended. "The hiring or use of children in agriculture except on a farm owned or operated by the parent or guardian should be completely prohibited. Such a measure is necessary to protect the children who, under color of the exemption permitting employment not in conflict with local educational routines, have been used in large numbers as hired hands in California agriculture."

RECREATION AND HOUSING FOR WOMEN WAR WORKERS. (Women's Bureau Bulletin No. 190, Washington, 1942. 40 pp.) This handbook, prepared by Mary V. Robinson, stresses particularly the importance of adequate housing and wholesome recreation for women and girls, many of whom are at work away from home and family for the first time.

Plans for Hospital Nurseries for Newborn Infants[1]

By Ethel C. Dunham, M. D., and Olivia Fountain Tesone, and Silver L. Tesone, *Architects, Washington, D. C.*

Careful planning for hospital care of newborn infants, especially premature ones, is an outstanding need at the present time. Experience has shown not only that adequate and qualified medical and nursing care is essential, but that a favorable environment must be provided, which includes optimum atmospheric conditions, suitable facilities, and sufficient space.

A method is presented here for determining, in small, medium, and large hospitals, the number of rooms needed to care for newborn full-term and premature infants, and for determining the size that these rooms should be to meet established standards.

The first step is to determine the size of the service; that is, to estimate the number of cribs or bassinets needed for full-term and for premature infants (table 1).

Table 1.—*Bassinets needed for premature and full-term infants in hospitals of various sizes*

Total number of live-born infants per year	Premature infants		Full-term infants	
	Number born per year [1]	Number of bassinets needed [2]	Number born per year [1]	Number of bassinets needed [2]
100	6	[3] 2	94	[3] 4
300	18	3	282	11
500	30	4	470	18
1,000	60	7	940	35
1,500	90	11	1,410	52
2,000	120	14	1,880	70
2,500	150	18	2,350	87
3,000	180	20	2,820	104

[1] The figures in this column are based on the expectancy that 6 percent of the total number of live births per year to white patients—ward and private—will be premature.

[2] The number of bassinets needed in a hospital can be approximated by dividing by 9 the number of premature infants and dividing by 27 the number of full-term infants.

[3] This number of bassinets has been fixed as a minimum for even the smallest hospital.

The number of infants born prematurely varies with several factors, among them race and economic status. Data from a number of sources indicate that if a birth weight of less than 2,500 grams is taken as a criterion of prematurity, the proportion of premature infants will be as follows: If private patients only are admitted to the service, the premature births will amount to about 5 percent; if private and ward white patients, about 6 percent; if white and Negro ward patients in nearly equal proportions, about 11 percent; if all Negro, about 13 percent.

The hospital's annual total number of live births, less the number expected to be premature, equals the estimated number of full-term infants born in a year. This number, divided by 365, will give the average daily number of full-term infants to be provided for. This number, multiplied by 10 (the average number of days of hospital stay for a full-term infant), will give the minimum number of bassinets required for full-term infants; that is, for 100 percent average annual occupancy. One-third of this number should be added in order to provide enough bassinets to allow for 75 percent occupancy.[2] It has been found that if the total annual number of full-term births is divided by 27, the figure derived by the above calculations will be approximated.

The estimated annual number of premature births, divided by 365, will give the average daily number of premature infants to be provided for. This number, multiplied by 30 (the average number of days of hospital stay for a premature infant) will give the minimum number of bassinets required for premature infants; that is, for 100 percent average annual occupancy. One-third of this number should be added in order to provide for 75 percent occupancy.[2] It has been found that if the total annual number of premature births is divided by 9, the figure derived by the above calculations will be approximated.

It is generally conceded that it would be ideal, from the point of view of preventing in-

[1] From the Children's Bureau, United States Department of Labor. This paper is part of a report read at the Second American Congress on Obstetrics and Gynecology (Section on Hospital Administration), St. Louis, Mo., April 9, 1942.

[2] In some hospitals it may be desirable to provide for 50 to 75 percent average annual occupancy; appropriate calculation will show how many additional beds are needed to meet a percentage of occupancy lower than 75.

fection, to care for each infant in a separate room, or in a completely enclosed cubicle, such as, for example, those used in The Cradle [3] or in the Presbyterian Hospital in Chicago.[4] If a nursery is used to house a group of infants the group should be relatively small, and individualized aseptic technique of care should be used. This will reduce the traffic into the nursery, with the result that danger of cross infection will be less, and the infection, if it does occur, will be limited to the unit.

A nursery for full-term infants should house not more than eight infants, and one for premature infants not more than four—the number of full-term and of premature infants that can be adequately cared for by one nurse. Therefore, the number of bassinets for full-term infants divided by 8 and the number of bassinets for premature infants divided by 4 will give the number of nurseries needed for full-term and premature infants.

It should be pointed out here that provision is not made in this plan for care of newborn and premature infants born outside the hospital and brought in for care. These infants require separate quarters in a part of the hospital remote from the maternity department.

In addition to the nurseries, accessory units will be needed, the number of which will vary with the size of the service. These units include rooms for isolation or observation of infants, chart rooms, examining room, supply and utility rooms, a nurses' locker room, a demonstration room, and a milk room.

In a relatively small hospital—with less than 500 live births per year—it may be unnecessary, and perhaps undesirable, to have separate nurseries for full-term and premature infants, and either incubators or glass cubicles can be used in the nursery to separate the premature from the mature infants. It probably will not be practicable, although it would be desirable, to have separate nursing service for full-term and for premature infants. It will also be unnecessary to provide separate accessory rooms, with the exception of separate isolation units.

In hospitals with 500 births or more all the accessory units, with the exception of the milk room and the demonstration room, should be separate for full-term and for premature infants.

The situation of the isolation units in relation to the nurseries and maternity service is a problem that must be settled in each individual hospital, as the opinion of clinicians will vary somewhat. It is probably best theoretically to have isolation cases cared for in a part of the hospital remote from the maternity service, but it will not always be practicable. The nurses caring for isolated infants should under no circumstances care for well infants. If separate locker rooms are provided for these nurses, this is an added protection against infection of the well infants.

A chart room should be provided which, in small hospitals with less than 500 births per year, may be a single unit. In larger hospitals, with 500 or more births, there should be two chart rooms, one for premature infants and one for full-term infants. The chart room should be so situated that it may be used as an anteroom to the nursery, and it need not be an outside room. The partition between the chart room and the nursery should be of glass, so that a view of the nursery is possible from the nurse's desk in the chart room. There should be desk space not only for the nurse or nurses on duty but also for the supervisor.

The same principle applies to the supply and utility room, that is, a single unit for small hospitals, separate units for larger ones. The room should be so constructed that there is storage space for blankets and linen, a table, a can for waste, and table space for an electric plate and an instrument sterilizer.

It is important in planning nurseries for full-term infants, especially for those attended by private physicians, to have a small examining room connected with the nursery only by a sliding glass window or a Dutch door. A table or shelf placed at the window-sill level makes it possible for the various doctors attending these babies to examine them without entering the nursery, a practice that has obvious advantages. The examining room should be equipped also with a lavatory, a disposal can, and hooks for gowns.

It is desirable to have a demonstration room, in which the mothers of full-term and of premature infants may be instructed in the care of their infants before being discharged from the hospital. In large hospitals there should be more than one demonstration room. One of these rooms can then be used when necessary for ritual circumcisions; and one of the isolation units, for observation of circumcized infants in the recovery period.

The milk room (formula room) should preferably be situated in a part of the hospital separate from the maternity unit. It should be separate from the diet kitchen also. The milk room should be composed of two parts, sepa-

[3] Erikson, Carl A., and Sauer, Louis W.: Control of Infection Begins in The Cradle. *Modern Hospital*, Vol. 55, No. 4 (October 1940), pp. 54–57.

[4] Bacon, Asa S.: Designed for Premature Infants. *Modern Hospital*, Vol. 52, No. 1 (January 1939), pp. 61–62.

rated by a Dutch door, one part for the reception and washing of contaminated glassware and utensils; the other for sterilization of glassware, preparation of milk mixtures, filling of bottles, cooling, and refrigerating them (fig. 6). Weymuller [5] has described a similar milk-room arrangement which is used at Long Island College Hospital.

A locker room separate from the general locker room for nurses should be provided for nurses caring for newborn infants. In larger hospitals in which the size of the nursing staff warrants it, separate locker rooms should be provided for the nurses caring for full-term and for premature infants. Segregation of these nurses is facilitated by placing a locker room for them in or near the maternity unit.

It is assumed that there will be provided elsewhere in the hospital a central laboratory, an X-ray department, a sterilizing unit, and a doctors' coatroom.

The next step is to determine the size of the different rooms (table 2).

TABLE 2.—*Square feet of space required for nurseries and accessory rooms in a small, a medium-sized, and a large hospital.*

Size of hospital	Square feet of space required for—						
	Nursery	Isolation or observation room	Chart room	Supply and utility room	Examining room	Demonstration room	Milk room
Small (100 live births per year):							
For both premature and full-term infants	268	67	45	67	34	89	89
Medium-sized (1,000 live births per year):							
For premature infants	268	89	45	67	.....	.....	.....
For full-term infants	1,340	223	134	268	170	.....	.....
For both premature and full-term infants	.....	.....	.....	.....	.....	179	201
Large (2,000 live births per year):							
For premature infants	536	179	90	134	.....	.....	.....
For full-term infants	2,412	402	201	402	306	.....	.....
For both premature and full-term infants	.....	.....	.....	.....	.....	268	335

A nursery for eight full-term infants has been taken as one unit (fig. 1). If this unit is 20 feet 4 inches by 13 feet 2 inches it will include approximately 268 square feet of floor space. This provides space for bassinets, lavatory, disposal cans, and table or shelf; and allows more than 2 feet of space between bassinets, 6 inches between any bassinet and any wall or partition, and 2 feet or more of aisle space. Each infant will then be provided with approximately 33 square feet of floor space in the nursery. A service of the size that requires space for eight full-term infants requires space for two premature infants (one-fourth of a space unit). (Fig. 2.)

Standards require 200 to 400 cubic feet of space for each infant.[6] A nursery having 268 square feet of space, if the ceiling is 9 feet high, has 2,412 cubic feet, or 301 cubic feet per infant.

The space requirement for isolation for full-term infants has been estimated on the basis of one isolated infant for each eight full-term infants. The minimum number of isolation beds is two, even in the smallest hospitals. The size of the isolation nursery is shown in figure 2. The beds should be separated by a partition.

For premature infants, because of their well-known susceptibility to infection, twice as much isolation space is necessary as for full-term infants; that is, one bed for every four infants.

The space requirements for the additional accessory rooms are also shown in table 2. These have been estimated on the basis of floor space required for furniture and persons using the rooms. A minimum ceiling height of 9 feet is assumed. Figures 3 to 7 show the minimum space required for the various rooms for the smaller hospital. Their relative size in relation to the nursery as a unit is indicated: for example, the chart room is equal to one-sixth of a unit (45 square feet).

Furnishings for the accessory rooms will not be described here, but they have been taken into consideration in estimating the size of the rooms and are shown in the plans.

All the rooms in which infants are housed should be completely air conditioned with forced ventilation. Under these conditions the cubic footage may be reduced slightly, provided the minimum space requirements are met. The air should be brought in from outside, filtered, warmed, and circulated; and there should be some device for cooling the nurseries in hot weather. Sterilization of air with ultraviolet light has been shown by studies to be an important factor in preventing infection.[7]

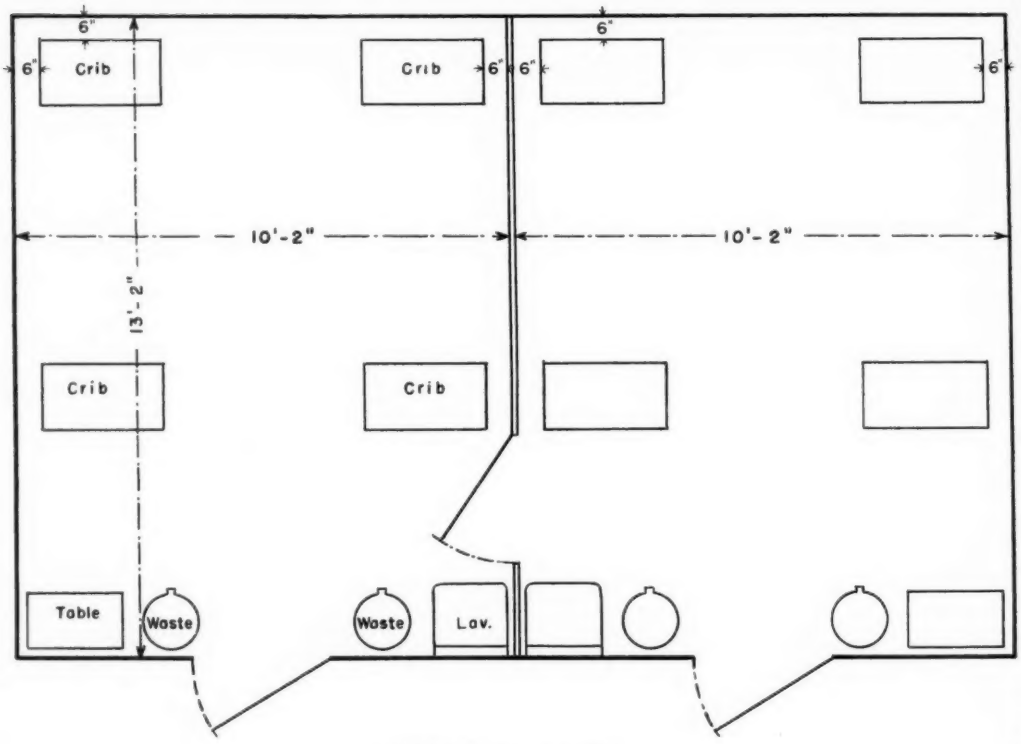
In the absence of air conditioning the temperature of the nurseries should be automatically controlled.

[5] Weymuller, Charles A.: Measures for Protection of Newborn Infants Instituted at the Long Island College Hospital. *The Child*, Vol. 5, No. 9 (March 1941), pp. 215–222.

[6] MacEachern, Malcolm T.: Manual on Obstetric Practice in Hospitals, p. 23. American Hospital Association, Chicago, 1940.

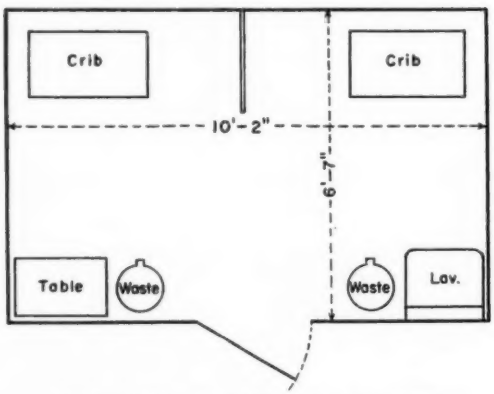
[7] McKhann, C. F.: Transactions Chicago Pediatric Society. American Journal of Diseases of Children, Vol. 62, No. 3 (September 1941), pp. 677–679.

Fig. 1



NURSERY – 1 UNIT

Fig. 2



OBSERVATION NURSERY – 1/4 OF 1 UNIT

Fig. 3

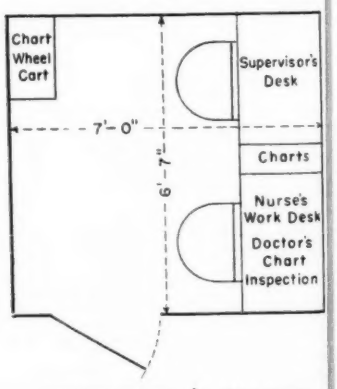
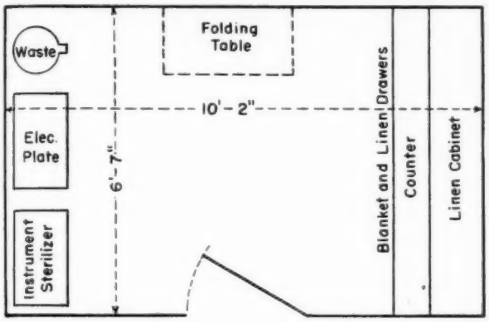


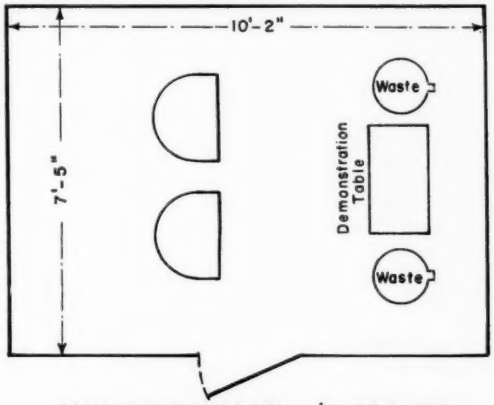
CHART ROOM – 1/6 OF 1 UNIT

Fig. 4



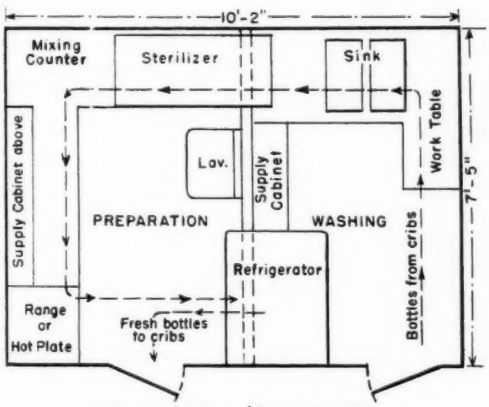
SUPPLY AND UTILITY ROOM – ¼ OF 1 UNIT

Fig. 5



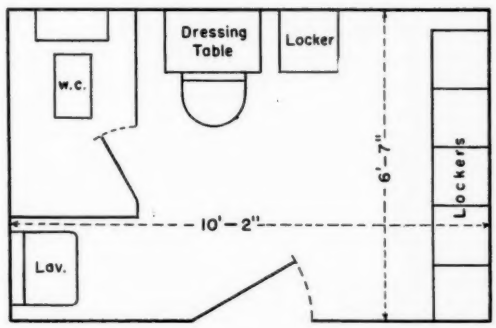
DEMONSTRATION ROOM – ⅓ OF A UNIT

Fig. 6



MILK ROOM – ⅓ OF A UNIT

Fig. 7



NURSES' LOCKER ROOM – ¼ OF 1 UNIT

In addition to planning for adequate space and equipment and for optimum atmospheric conditions, careful consideration must be given to the finishing of walls and floors so as to make cleaning easy and safe; to the number and spacing of windows, so as to afford adequate daylight; to provision of other needed lights; to height and material of partitions between bassinets; and to number and types of lavoratories, and other plumbing fixtures; to disposal of soiled diapers and other clothing and bed linen, and to provision for properly laundering them.

The final plan and working drawings for nurseries for newborn infants and for accessory rooms and services should be prepared by an architect upon whose technical knowledge complete reliance may be put. Consultation between the architect and the medical, nursing, and administrative staffs of the hospital *before* plans are drawn will obviously be conducive to meeting clinical and administrative needs. The results will contribute without doubt to maintaining in this difficult time of war the downward trend of neonatal mortality in the United States.

BOOK NOTES

VITAMIN K, by Hugh R. Butt, M. D., and Albert M. Snell, M. D. W. B. Saunders Co., Philadelphia, 1941. 172 pp. $3.50.

The monograph by Butt and Snell critically reviews medical reports on vitamin K and orients the reader in regard to the subject historically, chemically, and clinically. There are 350 references.

Chapter 1 gives general information in regard to the antihemorrhagic vitamin (vitamin K); chapter 2 is concerned with a discussion of the method of coagulation of the blood; chapter 3 discusses products which have vitamin K activity, both natural and synthetic; chapters 4 and 5 deal with pathologic conditions accompanied by a tendency to bleed; chapter 6 is devoted to the subject of the hemorrhagic diathesis of the newborn infant; and the final chapter, chapter 7, discusses hemorrhagic diathesis not related to prothrombin deficiency.

The relation of vitamin K to the clotting of blood was discovered in the course of experiments by Dam and Schönheyder extending from 1929 to 1935. Four years later the vitamin was isolated and synthesized. Since that time a number of forms of the vitamin have become available for clinical use.

Of special importance from the public-health aspect is the evaluation of this vitamin in the prevention of "the hemorrhagic diathesis of the newborn infant."

In the summary of chapter 5 the authors state, "General experience in the treatment of hemorrhagic diathesis of the newborn infant with vitamin K has not been so extensive as experience in treatment of the abnormal bleeding of patients that have jaundice, but reports available suggest that a decreased amount of prothrombin in the circulating blood is in some manner intimately associated with the abnormal bleeding of the newborn infant which is sometimes observed . . . The data available suggest that the prophylactic administration of vitamin K to mothers before or during labor will be of great value. The administration of synthetic products having vitamin K activity to newborn infants probably will supplant the intramuscular administration of blood as a means of prevention of hemorrhagic diathesis of the newborn infant."

At the end of this chapter the authors suggest that "for the pregnant mother vitamin K could be administered as 2-methyl-1, 4-naphthoquinone, 2 milligrams daily for 1 week prior to delivery, and that if necessity demanded, the form of this compound prepared for intravenous use could be administered in the same dosage at the time of labor. This prophylactic treatment in most instances results in the birth of an infant who has a normal value for prothrombin in the circulating blood. For the infant we suggest that 3.2 milligrams of 2-methyl-1, 4-napthohydroquinone-3-sodium sulfonate or other water-soluble compounds be given intramuscularly immediately after birth. This, in almost all instances, will prevent the occurrence of hemorrhagic diathesis resulting from a deficiency of prothrombin. Treatment with these dosages has not resulted in toxic manifestations in either mother or infant."

CARDIAC CLASSES AND THE CARE OF CARDIAC CHILDREN.—Report of a Subcommittee of the Committee for the Care and Education of Physically Handicapped Children in the Public Schools of the City of New York, Board of Education, New York. 1941. 99 pp.

In 1917 the Association for the Prevention and Relief of Heart Disease in New York City developed a research project to study the value of special cardiac classes for a certain number of "cardiac children." Four cardiac classes were set up during 1917 to provide the experimental material for the study. The investigation was interrupted by the declaration of war by the United States in 1917, but the original "cardiac classes" continued and others were established.

Although medical committees in 1923, 1926, and 1934 were unanimous in advocating the abolishment of the existing cardiac classes, the New York public-school system continued to increase the number of such classes, until in 1939 the estimated number of classes was 84 with a total attendance of 2,251 children.

The present report is made by a subcommittee of the committee for the study of the care and education of physically handicapped children in the public schools of the city of New York, appointed by the board of education in 1936. The committee has made certain broad criticisms of the existing system of segregated cardiac classes in Ne wYork City.

The committee believes, for example, that only a small percentage of the children with cardiac diseases are receiving special attention in the schools; that policies for these children have not been consistent; that the department of health has had no authority over the conduct of special classes; that there has been a lack of interchange of information by the schools and private physicians, hospitals, clinics, convalescent homes, and social agencies concerned with the care of cardiac children. From the medical point of view the commitee found that assignments of cardiac children to special classes have not been based upon adequate diagnostic criteria, medical and nursing supervision for cardiac children has been inadequate, too little emphasis has been placed on rheumatic fever and too much on heart disease.

From the educational point of view, the committee found that the percentage of children segregated in cardiac classes who were overage for their grade was very high in comparison with pupils in regular classes; that the predominant type of learning activity was individual seat work; that there was less emphasis here than in regular school classes on the interpretive, appreciative, and integrative phases of school subjects.

The committee recommends that adequate diagnosis and medical and nursing supervision should be furnished by the department of health, that measures be taken to reduce the spread of upper respiratory infections among cardiac children, that there be extension of educational programs for children who are at home or in hospitals or convalescent homes, and that a complete register be kept of all children with rheumatic fever, chorea, or rheumatic heart disease.

B. H.

POSTURE IN NURSING, by Jessie L. Stevenson. Published and distributed by Joint Orthopedic Nursing Advisory Service of National Organization for Public Health Nursing and National League of Nursing Education, 1790 Broadway, New York, 1942. 63 pp. This handbook is one of a series planned by the author in relation to orthopedic nursing and deals with posture and body mechanics and their application to nursing.

DIRECTORY OF HOSPITALS AND CONVALESCENT INSTITUTIONS ENGAGED IN WORK FOR CRIPPLED CHILDREN IN THE UNITED STATES OF AMERICA. National Society for Crippled Children of the United States of America, Elyria, Ohio, 1942. 115 pp. $1. This directory, first published in 1938, has been completely revised and expanded.

INTER-AMERICAN COOPERATION

Brazil

Industrial Training

A decree-law (No. 4073) of January 30, 1942, provides for the organization in Brazil of a national system of industrial training for youths and adults employed in industry, handicrafts, transportation, communications, and fisheries.

Under the law industrial courses of 4 years' duration will be established to give complete training in a given occupation to young persons. Applicants must be not less than 12 years of age and not more than 17 years of age.

A certificate of primary education and a certificate of ability to do the physical and mental work of the course are required. The schools will be maintained by the Government under the supervision of the Federal Ministry of Education. The instruction is to be free, at least for the students from low-income families. A system of vocational guidance is to be maintained in connection with the school.

The law also provides for advanced courses for those who have finished the industrial course, courses for artisans, and courses open to apprentices of industrial establishments. These courses will last from 2 to 3 years. There will also be 1-year courses for the training of instructors.

Legislacao do Trabalho, São Paulo, February 1942.

Organization of the National Children's Bureau

A special decree-law (No. 3775) of October 30, 1941, supplementing that of 1940 for the establishment of the National Children's Bureau of Brazil, provides that the Bureau is to consist of the following parts: Division of Child Welfare; Division of Federal Cooperation; National Institute of Puericulture and Administrative Division, with a director for each of the three divisions. Provision is made for the calling of a national conference on child welfare at regular intervals by the President of the Republic with the participation of representatives of the Federal and State Governments, for the coordination of child-welfare activities throughout the country, for the preparation of plans, and for the study of programs to be carried out by the Federal, State, and municipal Governments.

Diario Oficial, Rio de Janeiro, November 1, 1941. Section 1, p. 2088.

Panama

School for Handicapped Children

A special school for children whose mental or physical handicaps prevent their education with normal children is to be established in Panama under a Presidential decree promulgated on May 15 through the Ministry of Education.

Committee for Child Study

The decree also provides for the formation of a Committee for Child Study, which will function under the Technical Department of the Ministry of Education. The committee is to be composed of "an educator with a university degree in psychiatry, a psychiatrist, an educator with experience in the teaching of mentally deficient children, and a social worker." It is to determine the number of mentally and physically handicapped children in Panama and to develop special courses of study for the school for handicapped children which will best assure the assimilation of these children in the cultural and economic life of the Nation.

La Estrella de Panama, May 16, 1942; also correspondence with the Secretary of State.

EVENTS OF CURRENT INTEREST

Joint Committee On Evacuation

The Joint Committee on Evacuation, of which Dean Landis is chairman, now has headquarters at the Office of Civilian Defense. Dr. Martha M. Eliot has been appointed secretary of the committee, representing the Office of Defense Health and Welfare Services, and will give part time to the work of the committee.

Bulletin No. 1, The Civilian Evacuation Program—Policies and Principles, and Bulletin No. 2, The Civilian Evacuation Program—Planning for Evacuation and Reception Care, have been issued and are being distributed by the regional evacuation officers and regional directors of the Office of Civilian Defense through State and local defense councils and State and local evacuation authorities. Their use is restricted to administrative purposes.

Retirement of Miss Hanna

Effective as of July 1, 1942, Agnes K. Hanna retired as Director of the Social Service Division of the Children's Bureau, a position she had held since October 1, 1926. It is planned that Miss Hanna will be available for occasional special consultant service to the Children's Bureau relating to State legislation, a field in which she has given invaluable service through the years. Increasingly Miss Hanna's advice has been sought by State groups interested in improving the legislative foundation of the State for service to children. She has exercised an influence which will be lasting, particularly with reference to State responsibility for leadership in developing and making effective standards for the care and protection of dependent children, children born out of wedlock, and children placed for adoption.

Because of the close relationship between the work of the Child Guidance Division, headed by Elsa Castendyck, and the Social Service Division, the two divisions have now been merged into a single division under the title, "Social Service Division." Miss Castendyck has been given the responsibility of director of the combined divisions. Miss Castendyck has been with the Children's Bureau since June 26, 1936.

Conference on Services for Handicapped

At the suggestion of the American Physiotherapy Association, a conference of national organizations engaged in activities related to services for the handicapped is being called at the Roosevelt Hotel, New York, on August 15 and 16, to consider problems related to the health, education, and welfare of handicapped persons and the needs for developing a comprehensive program of services for their care, treatment, and training.

Special attention is to be given to those who may become disabled while in the armed forces, those rejected by military draft boards because of a disability, civilians with disabilities resulting from enemy action or from industrial accidents, and handicapped civilians who may be rehabilitated and become employed in essential industries.

A. D. A. Conference Cancelled

The American Dental Association announces the postponement of its annual meeting, which was scheduled for August 24-28 in Boston.

CONFERENCE CALENDAR

Sept. 28–Oct. 2	National Recreation Association. War Recreation Congress, Cincinnati. Information: T. E. Rivers, National Recreation Association, 315 Fourth Avenue, New York.
Oct. 6–8	National Safety Council. Thirty-first National Safety Congress, Chicago. Permanent headquarters: 20 North Wacker Drive, Chicago.
Oct. 12–16	American Hospital Association, St. Louis. Permanent headquarters: 18 East Division Street, Chicago.
Oct. 18–21	National League to Promote School Attendance, Rochester, N. Y. Information from C. L. Mosher, 710 Eighteenth Street, Santa Monica, Calif.
Oct. 19–23	National Probation Association, Asheville, N. C. Permanent headquarters: 1790 Broadway, New York.
Oct. 27–30	American Public Health Association. Seventy-first annual meeting, St. Louis. Permanent headquarters: 1790 Broadway, New York.
Nov. 8–14	American Education Week. General theme: Education for Free Men. Sponsored by National Education Association, 1201 Sixteenth Street, NW., Washington.
Nov. 15–21	Children's Book Week. A Nation-wide cooperative program shared by educators, librarians, scout leaders, booksellers, and publishers. Poster and information from Book Week Headquarters, 62 West Forty-fifth Street, New York.

U. S. GOVERNMENT PRINTING OFFICE: 1942

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